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U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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echoes



EXPERIMENTAL PELLAGRA IN THE HUMAN SUBJECT BROUGHT ABOUT BY A RESTRICTED DIET.

By JOSEPH GOLDBERGER, Surgeon, and G. A. WHEELER, Assistant Surgeon, United States Public Health Service.

In this communication we present a brief outline, with the results, of an experiment planned to test the possibility of producing pellagra in the healthy human, white, adult male, by a restricted, one-sided, mainly carbohydrate (cereal) diet.

The experiment was carried out at the farm of the Mississippi State Penitentiary, about 8 miles east of Jackson, Miss. At about the center of this farm of some 3,200 acres, well isolated from the surrounding communities, is the "camp," consisting of a group of frame buildings, including the cottages of the officials, the "cage," "new hospital," barns, stables, etc. Dr. A. G. McLaurin, the prison physician, informs us that there is no history of the occurrence or presence of pellagra on this farm.

During the period of the experiment there have been quartered at this "camp" an average of between 70 and 80 convicts, all white males. Included in this number were 12 who, accepting the offer of a pardon made them by Gov. Brewer and with the assurance of proper care and treatment should such be needed, volunteered to submit themselves to the experiment. White adult males were selected because, judged by the incidence in the population at large, these would seem to be least susceptible to the disease.

Experiment.

The volunteer squad of 12 men was organized between February 1 and February 4, 1915. On July 1, 1915, one of the volunteers was released because of the development of a prostatitis. This left 11 men in the squad, 24 to 50 years of age, who have remained in the test, on the prescribed diet, to its termination, October 31, 1915. These men were quartered in the so-called "new hospital building," a small, screened, one-storied cottage, about 500 feet from the "cage" in which the other convicts were domiciled. This cottage had previously been used as the quarters for the "assistant sergeant" of the "camp." From the time of its organization this squad was strictly segregated and under guard day and night.

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Dr. Goldberger and Dr. G. A. Wheeler produced pellagra in 6 of 11 men by restricting their diet mainly to carbohydrates. Later, with Sydenstricker (*Public Health Reports*, March 19, 1929, pp. 648-713), they showed a relationship between pellagra and diet lacking in milk and fresh meat.